1. Make a variable named fruits_a that contains a list of only the fruits that does not contain the letter "a". fruits=[]

The fruit name has to be taken as an input from the user.If a fruit with letter "a", then the user should be asked to re-enter the input, and if user enters two consecutive fruits with letter "a", then the list should clear all the elements appended and give an appropriate message.

Sort the list in ascending order. Count the number of duplicate fruit names in the list.

Create a new list from fruits_a, that has more than 4 letters in their name.

In [2]:

```
fruits_a=[]

while True:
    hi=int(input("waana give fruit name 0/1?"))
    if hi==1:
        ran=input("enter fruit name")
        if "a" in ran:
            print("dont put fruit name which consists a")
            ran=input("enter fruit name")
            if "a" in ran:
                fruits_a.clear()
            else:
                fruits_a.append(ran)

        else:
            fruits_a.append(ran)
    if hi==0:
        break
print(fruits_a)

result=True
first=fruits_a[0]
for i in range(1,len(fruits_a)):
    word=fruits_a[i]
    if first!=word:
        result=False
        print("there is no duplicate ")
    elif first==word:
        print(" duplicate")
print(fruits_a.sort())
new_list=[]
for i in fruits_a:
    if len(i)>4:
        new_list.append(i)

print("new list is :",new_list)
print(sorted(fruits_a))
```

```
waana give fruit name 0/1?1
enter fruit namecherry
waana give fruit name 0/1?1
enter fruit nameaam
dont put fruit name which consists a
enter fruit namejaam
waana give fruit name 0/1?1
enter fruit namekiwi
waana give fruit name 0/1?1
enter fruit namecherry
waana give fruit name 0/1?1
enter fruit nameplum
waana give fruit name 0/1?0
['kiwi', 'cherry', 'plum']
there is no duplicate
there is no duplicate
None
new list is : ['cherry']
['cherry', 'kiwi', 'plum']
```

In [ ]:

```
```

2.1. Make a variable named fruits_a that contains a list of only the fruits that contain the letter "a" with occurences more than 1. fruits=[]

In [1]:

```
pin=int(input("enter your number"))
fruits_a=[]
for i in range(pin):
    count=0
    fro=input("enter the fruit : ")
    for i in fro:
        if i=="a":
            count+=1
    if count>1:
        fruits_a.append(fro)
print("the list is :",fruits_a)
```

```
enter your number3
enter the fruit : mango
enter the fruit : banana
enter the fruit : cherry
the list is : ['banana']
```

3.Create a list with prime numbers ranging from range m,n where m and n are user given range. Provide the explanation of the code using markdown. *Use the concept of user-defined functions.

In [2]:

```
def find_prime():
    m=int(input("enter fisrt number :"))
    n=int(input("enter second number: "))

    list=[]
    for i in range(m,n):
        if i==0 or i==1:
            continue
        else:
            for j in range(2,int(i/2)+1):
                if i%j==0:

                    break
            else:
                list.append(i)
    return(list)
```

In [4]:

```
find_prime()
```

```
enter fisrt number :7
enter second number: 56
```

Out[4]:

```
[7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53]
```

here we have to find prime numbers in an interval.Here i can edxplain the process which i did is 1.first off all i took two integers for creating a interval from user.then i took an empty list.then i use for loop,for for any i in interval (m,n) if i=0/1 we will continue as 0 and 1 are not prime.let say,7 and n=56,then for any number (say i) between 7 and 56 ,we toook another parameter j in the range(2,int(i/2)+1) here it is range(2,4) and suppose i=9 and j=3 then i%j==0,and then it will not be a prime,if i=10 and j=3 then i%j!=0,then it is a prime.and here we took range(2,int(i/2)+1) as if int(i/2)+1=12 then range(2,2) will not make any sense.

In [ ]:

```

```